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TITLE: Emotional, Biological and Cognitive Impact of a Brief Expressive Writing Intervention for Women at Familial Breast Cancer Risk

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14. ABSTRACT Women at familial breast cancer risk have highly inflated perceptions of their risk of developing the disease, high levels of cancer-specific distress, and lower levels of natural killer cell activity (NKCA) than women without familial breast cancer risk. The proposed study will examine the impact of an expressive writing intervention on emotional, biological, and cognitive processes among women at familial breast cancer risk. This intervention has been shown to have positive effects on emotional outcomes (e.g., decreased distress), biological outcomes (e.g., increased NKCA), and cognitive outcomes (e.g., increased working memory) in individuals writing about a variety of life stressors including minor stressors and major trauma. We propose a randomized controlled trial examining the effects of expressive writing intervention on emotional, biological, and cognitive functions in healthy women at familial breast cancer risk.					
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REPORT OVERVIEW

Annual Award Number W81XWH-04-1-0556

**“Emotional, Biological, and Cognitive Impact of a Brief Expressive Writing
Intervention for Women at Familial Breast Cancer Risk”**

“Emotional, Biological, and Cognitive Impact of a Brief Expressive Writing Intervention for Women at Familial Breast Cancer Risk”

Principal Investigator: Dr. Heiddis Valdimarsdottir

INTRODUCTION:

Having a family history of breast cancer is a risk factor for developing cancer in one's lifetime. Women at familial breast cancer risk have highly inflated perceptions of their risk of developing the disease, high levels of cancer-specific distress, and lower levels of natural killer cell activity (NKCA) than women without familial breast cancer risk. The most common intervention for women at familial risk is breast cancer risk counseling which provides a wealth of information about personal breast cancer risk and various screening options. Considering the high levels of cancer-specific distress that many of these women report, it may not be surprising that a number of studies now suggest that these women do not adequately process the information provided to them during the counseling. The possibility that distress associated with familial breast cancer risk affects cognitive processing is raised by studies demonstrating that working memory, which plays a critical role in various tasks, including learning of new information, is compromised by intrusive thoughts about stressful life events. The proposed study will examine the impact of an expressive writing intervention on emotional, biological, and cognitive processes among women at familial breast cancer risk. This intervention has been shown to have positive effects on emotional (e.g., decreased distress), biological (e.g., increased NKCA), and cognitive outcomes (e.g., increased working memory) in individuals writing about a variety of life stressors including minor stressors (e.g., going to college) and major trauma (e.g., surviving the Holocaust). We propose a randomized controlled trial examining the effects of an expressive writing intervention on emotional, biological, and cognitive functions in women at familial breast cancer risk.

The goal of the proposed research is: first, to examine the impact of expressive writing on emotional, biological, and cognitive outcomes among women at familial breast cancer risk. We hypothesize that: 1) the expressive writing intervention will lead to reduced distress, increased immune function (e.g., NKC) and increased cognitive functioning (e.g., working memory); 2) the impact of the intervention on immune function and working memory will be mediated by cancer-specific distress; 3) the intervention will

be particularly effective for women with high levels of social constraints in expressing their concerns about cancer. Second, to determine if expressive writing improves the effectiveness of familial risk counseling. We hypothesize that: 1) the women in the expressive writing intervention will have greater increases in knowledge following the risk counseling than women in the control condition and be more likely to adhere to recommended surveillance behaviors; 2) this increased knowledge will be due to the beneficial effects of the intervention on emotional and cognitive processes.

BODY:

As indicated in our Statement of Work, our goal was to recruit participants into the study in months 20 to 44 of the grant. As we discussed in last year's submission, during the first two years, we had expected to start recruiting and enrolling participants into the study and to be collecting data. However, we were behind in recruitment for the following reasons: 1) We had to spend more time than expected on designing an appropriate familial breast cancer risk counseling session. The current literature mainly focuses on hereditary breast cancer risk counseling sessions, but that type of counseling is not appropriate for women at familial breast cancer risk. Therefore, we spent a considerably longer time than anticipated to develop a counseling manual with information tailored to women at familial risk; 2) We modified the study to include Caucasian women as we had access to daughters of Caucasian breast cancer patients through Dr. Ambrosone's study entitled "Race and Risk Factors for Early/Aggressive Breast Cancer." This allowed us to examine the generalizability of expressive writing to African-American women without compromising the original aims of the study. Data are available for 63 participants, who have signed consent forms. Research Assistants are continuing to enter data for these participants and the Principal Investigator and Project Coordinator regularly complete quality checks on the data. The study has been closed to enrollment and a no-cost continuation has been requested in order to complete follow-ups with currently enrolled participants.

KEY RESEARCH ACCOMPLISHMENTS:

At this point in the research, we have designed a familial breast cancer risk counseling session, modified the measures, and extended our eligibility criteria to include Caucasian women. We identified and enrolled eligible participants from Project 3 "Immune surveillance, stress, and inherited susceptibility to breast cancer: A psychobiological analysis of the healthy daughter of breast cancer patients" (Dr. Bovbjerg) and from Dr. Ambrosone's study entitled "Race and Risk Factors for Early/Aggressive Breast Cancer." IRB approval has been obtained from The Mount Sinai School of Medicine and the DOD's IRB.

REPORTABLE OUTCOMES:

Data are available for 63 participants, who have signed consent forms. At this point in the research, there are not any outcomes to report. Research Assistants are continuing to enter data for these participants and the Principal Investigator and Project

Coordinator regularly complete quality checks on the data. The study has been closed to enrollment and a no-cost continuation has been requested in order to complete follow-ups with currently enrolled participants.

CONCLUSIONS:

To date, we have developed the familial breast cancer risk counseling session. The measures and phone scripts have been modified based on recent literature. All modifications have been approved by The Mount Sinai School of Medicine's IRB and the DOD. We have requested an extension, or no-cost continuation, in order to follow-up with currently enrolled participants. The study has been closed to enrollment.

REFERENCES:

None.

APPENDIX:

Not applicable.